

ACC NR: AR6035289

SOURCE CODE: UR/0269/66/000/009/0044/0044

AUTHOR: Bystrova, N. V.; Gosachinskiy, I. V.; Yegorova, T. M.; Ryzhkov, N. F.

TITLE: Attempt to observe the hydrogen radio-frequency spectral line at the 1424.736 mc frequency in the Horseshoe and Orion Ori nebulae

SOURCE: Ref. zh. Astronomiya, Abs. 9.51.380

REF SOURCE: Astron. tsirkulyar, no. 355, fevr. 11, 1966, 2-3

TOPIC TAGS: hydrogen line, nebula, ~~Horseshoe nebula~~, ~~Orion nebula~~ *radio emission, cosmic radio emission*

ABSTRACT: Investigations of excited hydrogen radio-frequency spectral lines have been continuing at the Pulkovo Observatory. The RMS of measurement error of ± 0.25 km/sec is found to be lower than that of the errors determined by the profile of the line. Omega and Orion nebulae were observed in October and November 1965. Profiles were obtained of the absorption lines in these nebulae, as well as of the emission line detected in the direction of the galactic center. The ratio of maximum intensity in the line to the continuous spectrum intensity, line widths at the half-power points, the nebula velocity determined on the basis of

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UDC: 523,164,4

ACC NR: AR6035289

the maximum and of the center of gravity of the line, were calculated for Omega and Orion. The mean kinetic temperature for Omega and Orion were also determined. The results are somewhat different from the data of B. Hoglund and P. G. Mezger for the 5009 mc. The radiation line is narrow, $\Delta\nu = (270 \pm 70)$ kc, and is formed in a small compact region moving at a velocity of $-(10 \pm 1)$ km/sec.
[Translation of abstract]

[DW]

SUB CODE: 03/

Card 2/2

BYSTROVA, N.V.; GOSACHINSKIY, I.V.; YEGOROVA, T.M.; RYZHKOV, N.F.

Right ascensions and dimensions of, and fluxes from, some
discrete radio sources observed at a wavelength of 21 cm.
Izv. GAO 24 no.1:73-76 '64. (MIRA 18:3)

YEGOROVA, T.M.

Observations of the Sagittarius-A source in the HI line at
large radial velocities. Izv. GAO 24 no.1:77-80 '64.
(MIRA 18:3)

L-26479-65 FBD/EWT(1)/EWG(v)/EEC(t)/EEC-4 Pg-5/Pac-2/P1-4 / GW/VS

APPROVED FOR RELEASE: 09/01/2001

APPROVED FOR RELEASE: 09/01/2001

TRANSLATION: Observations were made of two proposed remnants of supernova explosions with the aid of an antenna having an angular resolution of 1.2 degrees. It was found that the radio emission from these sources have the form of a point source.

SUB CODE: AA, EC
Card 1/1

ENCL: 00

L 22429-65 FBD/ENT(1)/ZWO(V)/EBO-4/ERO(t) Pa-5/Pao-2/P1-1 12/45

EXCLUDED BY AS 1013.1

10.51.327

AUTHOR: Bystrova, Ch. V., Gosachinskiy, I. V., Yezorova, T. M., Ryzhkov, N. P.

TITLE: Observations of the radio sources 444 and 428 with high angular resolution in the radio waves

OTHER SOURCE: 10.51.327

YECOROVA, T.M.; RYKALOV, N.F.

Receiver for observations of interstellar medium. Receiver
at 21 cm. with the Fudkov's large radio telescope. 1964.
CAO 23 no.3:194-202 1964.

(U.S.S.R.)

RYZHKOV, N.F.; YEGOROVA, T.M.; GOSACHINSKIY, I.V.; BYSTROVA, N.V.

Observations of the galactic center in the continuous spectrum
at 1420 mc/s frequency ~~and in the hydrogen line~~ hydrogen line. Izv. GAO
23 no.3:3-8 '64.

Calibration observations of some radio emission sources at
1420 mc/s frequency. Ibid.:25-30

(MIRA 17:11)

BYSTROVA, N.V.; GOSACHINSKIY, I.V.; YEGOROVA, T.M.; RYZNEV, R.F.

Neutral hydrogen in the region of Omega nebula NGC 6618. Izv. GAO
23 no.5:111-115 '64.

Fine structure of radio sources W43 and W51 from observations
with high angular resolving power. Ibid.:116-120 '64.
(MIRA 17:11)

~~Yegorova, T. N.~~

ZHDANOV, YU. A.; SHCHERBAKOVA, L. I.; YEGOROVA, T. N.

Glucose Derivatives

Investigations of C - C - derivatives of glucose. Dokl. AN SSSR 83 No. 3, 1952.
Moskovskiy Gosudarstvennyy Universitet im. M. V. Lomonosova. Rcd. 12 Feb. 1952.

Monthly List of Russian Accessions, Library of Congress, August 1952. UNCLASSIFIED.

5(2)

SOV/32-25-1-19/51

AUTHORS:

Rabovskiy, G. V., Yegorova, T. N., Kasatkina, O. P.

TITLE:

Rapid Method of Determining Sulfur Dioxide in Hydrogen Fluoride
(Bystryy metod opredeleniya dvuckisl sery vo ftoristom
vodorode)

PERIODICAL:

Zavodskaya Laboratoriya, 1959, Vol 25, Nr 1 pp 36-38 (USSR)

ABSTRACT:

As the iodometric method does not allow an accurate measurement of SO_2 in gaseous HF, a determination in a bicarbonate medium is proposed in the present case. By the reaction of HF with the bicarbonate an equal volume of CO_2 is formed and in a reaction of one SO_2 mole with iodine in a bicarbonate medium, four moles CO_2 are formed. The CO_2 volume can be determined with sufficient accuracy and so can the content of SO_2 . It is assumed that the errors caused by a dissolution of CO_2 in the bicarbonate solution are rather small under the conditions given. Experiments in an absorption vessel (Fig) (with stirrer and Hg seal) were carried out to confirm this. The experimental results obtained (Table 1) showed that the above mentioned

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YEGOROVA, T.V.; KROGIUS, F.V.; KURENKOV, I.I.; SEMKO, R.S.

Causes of variations in the abundance of sockeye salmon in the
Ozernaya River. Vop. ikht. 1 no.3:439-447 '61. (MIRA 14:11)

1. Kamchatskoye otdeleniye Tikhookeanskogo nauchno-issledova-
tel'skogo instituta rybnogo khozyaystva i okeanografii - TINRO.
(Ozernaya River (Kamchatka)--Salmon)

SOV/32-25-1-19/51

Rapid Method of Determining Sulfur Dioxide in Hydrogen Fluoride

error does relatively not exceed $\pm 3\%$. An analysis step as well as the results obtained therefrom (Tables 2,3) are mentioned. The method allows determinations of 0.01% by weight of SO_2 and more, with an analysis taking from 10 to 15 minutes, and the relative error is mentioned to be 5-7%. There are 1 figure and 3 tables.

Card 2/2

Investigation of the electrical conductivity and dielectric permeability of semiconducting materials in the system of the oxides of manganese and cobalt. V. N. Novikov.

Physico-chemical investigation and electrical conductivity of cobalto-titanium oxide semiconductors. T. N. Yegorova, Ye. V. Kurlina, I. T. Sheftel.

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

20-114-3-35/60

AUTHORS: Yegorov, M. M., Yegorova, T. S., Kiselev, V. F.,
Krasil'nikov, K. G.

TITLE: The Adsorption of Water Vapors on Silica Gels Hydrated to
Varied Degrees (Adsorbtsiya parov vody na silikagelyakh razlichnoy
stepeni gidratatsii)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 3, pp 579-582 (USSR)

ABSTRACT: As is known, the adsorption of water vapors on silica gels is
characteristic by some specific properties. Some previously
published scientific papers have investigated in detail the
irreversible adsorption of water vapors which is connected
with an additional hydration of the silica-gel surface in the
process of adsorption. Other investigations reached the con-
clusion that the isotherm of the adsorption of water vapors,
depending on the degree of the dehydration of the silica-gel
surface and of porous glasses, is transformed from a convex
into a concave line, the latter corresponding to a hydro-
phobic surface. There exist different divergences in computing
the specific surfaces of silica gels from the isothermal lines.

Card 1/4 None of the authors of the above-mentioned scientific papers

20-114-3-35/60

The Adsorption of Water Vapors on Silica Gels Hydrated to Varied Degrees

conducted the chemical analysis of the surfaces of the silica gels and of porous glasses. This task was now performed by the authors of the paper under review. Figure Nr 1 of the paper under review represents the isotherms of the water vapors on the initial silica gels and also the curves of distribution - as computed from the desorption branches - of the pore volume with respect to their effective diameter taking into account the thickness of the adsorbed film. Figure Nr 2 contains the initial segments of the primary vapor adsorption on all samples of silica gels, computed for 1 m^2 of the surface. It can be seen from figure Nr 2A that the isotherms of the three initial samples, worked at 300 degrees centigrade, are placed in such a way that p/p_s being the same, the adsorption decreases with a decrease in the degree of hydration of the surface, and this corresponding to the observed reduction in heat of the water moistening of the same samples. The state attained at the water adsorption at the thermally dehydrated surfaces are not equilibrated, as far as in this case the process of hydration of the surface can take place. However, in the monomolecular range at small p/p_s this process is very slow. Therefore it is possible to consider the isotherms of the figure Nr 2A of the silica gel samples K-2, annealed at high tempera-

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20-114-3-35/60

The Adsorption of Water Vapors on Silica Gels Hydrated to Varied Degrees

tures, as equivalent from the point of view of adsorption. For this purpose, however, one has to neglect the slight modification of the surface hydration during the process of establishing the adsorption equilibrium. If these isotherms are compared with the previous ones, it can be seen that, depending on the surface hydration, they change their form and become concave. It is furthermore observed that in this context the capacity of adsorption of the silica gel decreases. Quite a number of assumptions - as found in relevant scientific literature - on the mechanism of adsorption of water vapors on silica gel and on the hydration of its surface, are in contradiction to each other; these assumptions are based on adsorption data and also on the investigation of the infrared spectra of the surface layer. In order to clarify these questions, additional research is necessary, namely study of adsorption linked with spectroscopic investigations. There are 2 figures, 1 table, and 20 references, 14 of which are Slavic.

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20-114-3-35/60

The Adsorption of Water Vapors on Silica Gels Hydrated to Varied Degrees

ASSOCIATION: Moscow State University imeni M. V. Lomonosov
(Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova)

PRESENTED: December 14, 1956, by M. M. Dubinin, Member of the Academy

SUBMITTED: December 10, 1956

Card 4/4

AUTHORS: Yegorov, M.M., Yegorova, T.S., Kiselev, V.P., SOV/55-58-1-27/33
and Krasil'nikov, K.G.

TITLE: Influence of the Nature of the Silica Gel Surface on the
Adsorption of the Methyl Alcohol Vapors (Vliyaniye prirody poverkh-
nosti silikagelya na adsorbtsiyu parov metilovogo spirta)

PERIODICAL: Vestnik Moskovskogo universiteta, Seriya fiziko-matematicheskikh i
yestestvennykh nauk, 1958, Nr 1, pp 203-207 (USSR)

ABSTRACT: The paper is written under the leading of Professor B.V. Il'in
and contains the results of a detailed measuring of methyl
alcohol vapors which in the monomolecular range have been adsorbed
at the surface of the silica gel. Before the experiment, the
surface of the silica gel was submitted to the influence of
saturated water vapor up to 48 hours. The results are collected
in a table and two figures.
There are 15 Soviet references.

ASSOCIATION: Kafedra obshchey fiziki dlya khimicheskogo fakul'teta (Chair of
General Physics of the Department of Chemistry)

SUBMITTED: May 3, 1957

Card 1/1

SOV/76-32-11-25/32

5(4)
AUTHORS:

Yegorov, M. M., Yegorova, T. S., Krasil'nikov, K. G.,
Kiselev, V. F.

TITLE:

The Effect of the Nature of the Silica Gel and Quartz Surface
on Its Adsorption Properties (Vliyaniye prirody poverkhnosti
silikagelya i kvartsa na ikh adsorbtsionnyye svoystva) II.
Adsorption of Steam, Methyl Alcohol and Nitrogen on Silica
Gel of Different Degrees of Hydration (II. Adsorbtsiya parov
vody, metilovogo spirta i azota na silikagelyakh razlichnoy
stepeni gidratatsii)

PERIODICAL:

Zhurnal fizicheskoy khimii, 1958, Vol 32, Nr 11, pp 2624-2633
(USSR)

ABSTRACT:

Silica gel samples and non-porous "white soot" described in
the previous paper were used. The measurements of the adsorp-
tion were carried out according to the gravimetric method. It
was found (Fig 1) that with samples treated at 300°C the ad-
sorption (at constant p/p_g) decreases with a decrease of the
degree of hydration of the surface. The different adsorbability
of the investigated silica gels is not due to their structure

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SOV/76-32-11-25/32

The Effect of the Nature of the Silica Gel and Quartz Surface on Its Adsorption Properties. II. Adsorption of Steam, Methyl Alcohol and Nitrogen on Silica Gel of Different Degrees of Hydration

but to the chemical nature of the surface (their degree of hydration). It is assumed that the hydroxyl groups with water molecules can form hydrogen compounds on the surface (Ref 12), and thus act as adsorption centers. Contradicting data given by other authors on the adsorption centers mentioned above (Refs 15,16) are explained by a different technique of investigation. As the hydration of the surface of the investigated samples is different the adsorption properties of the surface with respect to the molecules capable of forming hydrogen compounds with hydroxyl groups are also different. Measurements carried out of the surface of hydrated KSK-1 samples occupied by water molecules showed that within the range of p/p_s from 0.1 to 0.3 the value ω changes from 39 to 22.5 \AA^2 and thus is considerably higher than that given in publications (10.6 and 14.8 \AA^2) (Refs 20-22). As the adsorption properties are functions of several factors (crystallography of the sample, chemical composition etc.) they cannot be called "absolute" properties ("absolute" isothermal lines). The authors thank M. M. Dubinin and B. V. Il'in.

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S07/76-32-11-25/32

The Effect of the Nature of the Silica Gel and Quartz Surface on Its
Adsorption Properties. II. Adsorption of Steam, Methyl Alcohol and Nitrogen
on Silica Gel of Different Degrees of Hydration

There are 8 figures and 29 references, 22 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: June 5, 1957

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5(4)

AUTHORS:

Yegorova, T. S., Kiselev, V. F.,
Krasil'nikov, K. G.

S07/20-123-6-28/50

TITLE:

The Differential Heats of the Adsorption of Water Vapors on
Silica Gels of Different Hydration (Differentsial'nyye teploty
adsorbtsii parov vody na silikagelyakh razlichnoy gidratatsii)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 6, pp 1060-1063
(USSR)

ABSTRACT:

No reliable data have hitherto been published on the dependence
of the differential adsorption heats of water vapors on the
filling up of the surface. In the present paper the silica gels
K - 2 and KSK - 3 were used. The characteristic data of the
adsorption on these samples are given in a table. The adsorption
heats of the vapors were measured in a calorimeter similar to
that described by reference 7; the wetting heats were measured
in a calorimeter with constant heat exchange. The water vapors
were adsorbed at constant vapor pressure. The authors
investigated the initial domains of isothermal lines and of the
differential adsorption heats of water vapors in various silica
gels by means of two methods. A diagram shows the wetting heats

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The Differential Heats of the Adsorption of
Water Vapors on Silica Gels of Different Hydration

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as functions of the previously adsorbed quantity of water. In a previous paper (Ref 1) homogeneous large-pore adsorbents were investigated within the domain of adsorption up to the beginning of capillary condensation. The results obtained by calculating the differential adsorption heat as a function of specific adsorption are shown in form of a diagram. The adsorption heats for the silica gel K - 2 - 300°, which were determined by means of direct calorimetric measurements, agree well with the theoretically calculated curves. The initial values of water adsorption on silica gel KSK are within the interval of 15 - 20 kcal/mol. At low degrees of filling the adsorbed molecules form 3 or even 4 hydrogen bonds with the hydroxyls of the surface. Part of the molecules is probably adsorbed within this domain on centers of higher energy. In the case of one and the same degree of filling the differential heats decrease with a decreasing degree of hydration of the surface. Also the differential entropy of water vapor adsorption

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The Differential Heats of the Adsorption of
Water Vapors on Silica Gels of Different Hydration

SOV/20-123-6-28/50

decreases with increasing surface hydration of the silica gels.
The authors thank B. V. Il'in for his interest in this work
and for discussing results. There are 3 figures, 1 table, and
14 references, 10 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: May 28, 1958, by M. M. Dubinin, Academician

SUBMITTED: May 26, 1958

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35065

S/195/62/003/001/006/010
E071/E136

5.1115

AUTHORS: Kvlividze, V.I., Iyevskaya, N.M., Yegorova, T.S.,
Kiselev, V.F., and Sokolov, N.D.

TITLE: NMR studies of water vapour adsorption on the surface
of silica gel

PERIODICAL: Kinetika i kataliz, v.3, no.1, 1962, 91-98

TEXT: The mechanism of adsorption and the state of the
adsorbed molecules on the surface of an adsorbent cannot be
elucidated on the basis of purely adsorptive measurement. For
this purpose some additional data on the system adsorbed
substance - adsorbent obtained by physical methods are necessary.
As a first stage in the investigations the authors studied signals
of nuclear magnetic resonance from protons of hydroxyl groups of
water adsorbed on the surface of silica gel. The results obtained
were compared with adsorption properties of silica gel, with
measurements of heats of adsorption and available spectroscopic
data. Silica gels K-2 (K-2) and K-4 (K-4) obtained by the
hydrolysis of SiCl_4 and a purified sample of technical silica gel
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NMR studies of water vapour ...

S/195/62/003/001/006/01C
E071/E136

KCK-3 (KSK-3) were used for the investigation. The NMR measurements were carried out at room temperature on a sample of 0.2-0.3 g. The width of the lines was measured as the distance between maxima on the differential curve. The second moment was calculated from the differential curve of the signal absorption. Additions of water vapour in the ampule with silica gel for NMR and adsorption measurements were carried out by means of a spring balance. Heats of adsorption were determined either directly from calorimetric measurements or by the differentiation of the curve relating the heat of wetting and the amount of water adsorbed on the specimen. From the adsorption data and heat of wetting curves, differential curves of the changes in free energy and entropy of adsorption were calculated. It was shown that molecules of water are absent on the surface of the samples evacuated at 200 °C. In the initial stage of adsorption a sharp decrease in the width of the line of the second moment was observed. These changes in the NMR signals agree with the trends of the curves of differential heat and entropy of adsorption. The possibility of interaction of water molecules

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X

NMR studies of water vapour ...

S/195/62/003/001/006/010
E071/E136

with the surface of silica gel through the coordination and
hydrogen bonds is discussed.
There are 5 figures and 1 table.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im.
M.V. Lomonosova, Fizicheskiy fakul'tet
(Moscow State University imeni M.V. Lomonosov,
Physics Division)

SUBMITTED: July 3, 1961

Card 3/3

X

BOBROV, Ye.G.; BONDARTSEV, A.S.; BORISOVA, A.G.; VASIL'KOV, B.P.;
VASIL'CHENKO, I.T.; GOLUBKOVA, V.P.; GRUDZINSKAYA, I.A.;
YECOROVA, T.V.; ZINOVA, A.D.; IVANINA, L.I.; LEKOVA, T.G.;
MATSENKO, A.Ye.; PIDOTTI, O.I.; POBEDIMOVA, Ye.G.; POLYAKOV,
P.P.; POYARKOVA, A.I.; SAVICH, V.P.; SIN'KOVA, G.M.; SMIRNOVA,
Z.N.; SMOL'YANINOVA, L.A.; FEDOROV, Al.A.; KHARADZE, A.L.;
TSVELEV, N.N.; SHISHKIN, B.K.[deceased]; PEN'KOVA, G.A., red.;
BARANOVA, L.G., tekhn. red.; FRIDMAN, Z.L., tekhn. red.

[Botanical atlas] Botanicheskii atlas. Moskva, Sel'khozizdat,
1963. 501 p. (MIRA 16:12)

1. Chlen-korrespondent AN SSSR (for Shishkin).
(Botany—Atlases)

YEGOROVA, T. V., Cand Biol Sci (diss) -- "Material for a monograph on sedges of the sub-genus *Vignea* (P. Beauv.) Kirsch". Leningrad, 1959. 22 pp (Acad Sci USSR, Botanical Inst im V. L. Komarov), 300 copies (KL, No 10, 1960, 128)

YEGOROVA, T.V.

Critical notes on sedges of the subgenus *Vignea* (p. Beauv.)
Kuk. Bot.mat.Gerb. 19:50-73 '59. (MIRA 12:8)
(Sedges)

YEGOROVA, T.V.

Supplements to the sedge flora of the Mongolian People's
Republic. Bot.mat.Gerb. 19:79-82 '59. (MIRA 12:8)
(Mongolia--Sedges)

YEGOROVA, T.V.

Key for the identification of sedges of the subgenus
Vignea (P.Beauv.) Kirsch. from the flora of the U.S.S.R.
Bot.mat.Gerb. 20:440-456 '60. (MIRA 13:7)
(Sedges)

SHEKLEIN, A.V.; YEGOROVA, T.V.

Photographic apparatus and supplies for operations on the Moon.

Zhur.nauch. i prikl.fot. i kin. 9 no.6:470-472 N-D '64.

(MIRA 18:1)

SAVIN, D.K., nauchn. sotr.; FRANKOVSKIY, TS.F., nauchn. sotr.;
NAURUZBAYEV, S.K., nauchn. sotr.; SON, I.N., nauchn.
sotr.; SUSLIN, V.D., nauchn. sotr.; MARTYUSHEV, Ye.D.,
nauchn. sotr.; ORLOVSKAYA, A., red.; YEGOROVA, V., red.

[Mechanization of livestock feeding] Mekhanizatsiia ot-
korma skota. Alma-Ata, Kainar, 1965. 237 p.

(MIRA 18:7)

1. Kazakhskaya Akademiya sel'skokhozyaystvennykh nauk.
Nauchno-issledovatel'skiy institut mekhanizatsii i
elektrifikatsii sel'skogo khozyaystva. 2. Kazakhskiy
nauchno-issledovatel'skiy institut mekhanizatsii i
elektrifikatsii sel'skogo khozyaystva (for all except
Orlovskaya, Yegorova).

VOROPAYEV, Grigoriy Vasil'yevich; YEGOROVA, V., red.

[Organization of irrigation work] Organizatsiia polivnykh
rabot. Alma-Ata, Kainar, 1965. 136 p. (MIRA 18:12)

USSR/Geology - Geochemistry

Card 1/1 Pub. 22 - 34/53

Authors : Yegorova, V. A.

Title : About the dynamics of phosphate distribution along the coastal region of the Black Sea

Periodical : Dok. AN SSSR 102/4, 783-786, Jun 1, 1955

Abstract : Results of investigations on the distribution of phosphates in the north-eastern coastal region of the Black Sea are presented. The method employed by the researchers is described. Four USSR references (1930-1953).

Institution : Black Sea Exp. Sc. Res. Station, Gelendzhik

Presented by : Academician A. P. Vinogradov, March 2, 1955

YEGOROVA, V.A.

Hydrochemical studies in the coastal zone of the northeastern
part of the Black Sea. Trudy Inst. okean. 21:137-164 '57.
(Black Sea) (MLRA 10:7)

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 1, p 192 (USSR)
SOV/137-57-1-1447

AUTHORS: Belousov, N. N., Yegorova, V. A.

TITLE: Improvement of the Properties of AL8 Alloy Castings (Povysheniye svoystv otlivok iz splava AL8)

PERIODICAL: V sb.: Novoye v teorii i praktike liteyn. proiz-va. Moscow-Leningrad, Mashgiz, 1956, pp 177-192

ABSTRACT: The mechanical properties of the AL8 Al-Mg alloy are not fully utilized under industrial conditions. According to the existing standards the permissible σ_b of specimens cut out of castings is to be reduced by 25% and the $\sigma_{0.2}$ by 50% as compared to the properties of individually cast specimens. This reduction is motivated by the friable spots due to shrinkage, porosity, and oxide impurities in the massive portions of the castings. In order to establish optimal procedures for smelting and crystallization the authors carried out an investigation of the standard AL8 alloy on specimens 15, 30, and 60 mm thick, both as cast individually and as cut out of technical test samples. In the experiments the preheat temperature was changed from 680 to 1000°C, the casting temperature was 680°. The

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Improvement of the Properties of AL8 Alloy Castings

SOV/137-57-1-1447

authors investigated the treatment of the liquid alloy with NH_4Cl , ZnCl_2 , MgCl_2 , and ZrK_2F_6 , the effect of the addition of Be, Ca, Ti, and Zr, and that of smelting atmospheres on the oxidizability of the casting surface and the effect of crystallization under pressure on the mechanical properties of the castings. The authors recommend the following measures for the maximum utilization of the advantages of the AL8 alloy and for obtaining high-grade castings: 1) No overheating of the alloy in the course of smelting $> 750 - 780^\circ$; 2) treatment of the liquid alloy with ZrK_2F_6 at 750° ; 3) addition of 0.005% Be to the alloy, and 4) casting with crystallization under omnilateral pressure in autoclaves in the production of heavy castings.

A. M.

Card 2/2

YEGOROVA, V. A. AND BELOUSOV, N. N.

"Experience Gained in the Pressure Casting of Magnesium-Lithium Alloys"

Light Alloys. no. 1: Physical Metallurgy, Heat Treatment, Casting, and Forming;
Principal Reports of the Conference, Moscow, Izd-vo AN SSSR, 1958, 497 P.

2nd. AU Conf on Light Alloys 1955

YEGOROVA, V.A.

Effect of the wind regime on the salt composition of atmospheric
precipitation on the northeastern shore of the Black Sea. Trudy
Inst. okean. 53:95-111 '61. (MIRA 15:2)
(Black Sea region—Precipitation(Meteorology))

YEGOROVA, V.A.; MISHINA, V.V.

Carbon dioxide in the atmosphere near Gelendzhik on the Black Sea.
Okeanologiya 2 no.4:642-650 '62. (MIRA 15:7)

1. Chernomorskaya eksperimental'naya nauchno-issledovatel'skaya
stantsiya g. Gelendzhik.
(Gelendzhik region—Air—Analysis) (Carbon dioxide)

YEGOROVA, V.A.; ZHELEZNOVA, A.A.

Specific alkalinity of the surface layer of the Mediterranean
Sea based on observations made in the summers of 1959-1960.
Okeanologiya 3 no.4:653-665 '63. (MIRA 16:11)

1. Chernomorskaya eksperimental'naya nauchno-issledovatel'skaya
stantsiya Instituta okeanografii AN SSSR.

YEGOROV, V.A., inzhener; redaktor; BOCHARNIKOVA, K.N., inzhener, redaktor;
VERINA, G.P., tekhnicheskii redaktor.

[Repairing railroad cars] Remont vagonov. Moskva, Gos. transportnoe
zheleznodorozhnoe izd-vo, 1953. 513 p. (MLRA 7:10)
(Railroads--Cars--Maintenance and repair)

YEGOROV, Vladimir Aleksandrovich; ARSHINOV, I.M., redaktor; KANDYKIN, A.Ye.,
tekhnicheskyy redaktor

[Manual for railroad car inspectors] Pamiatka osmotrshchiku vagonov.
Izd. 4-oe. Moskva, Gos. transp. zhel-dor. izd-vo, 1956. 61 p.
(Railroads--Cold weather operation) (MIRA 9:12)

YEGOROV, V.A.

Some problems of developing the railroad car industry in the sixth five-year plan. Tekh.zhel.der.15 no.4:1-3 Jo '56. (MIRA 9:9)

1.Nachal'nik Glavnogo upravleniya vagonnogo khozyaystva Ministerstva putey soobshcheniya.

(Railroads--Cars)

REZNIKOV, B.N.; kand. tekhn. nauk; BRYAZGUNOV, A.V., inzh.;
SOSNIN, V.A., kand. tekhn. nauk; YEGOROVA, V., red.
GRIGOR'YEV, A., red.
[Handbook of a repairman] Spravochnik remontnika.
Alma-Ata, Izd-vo "Kainar," 1964. 257 p. (MIRA 18:1)

ACC NR: AP7001411

(A)

SOURCE CODE: UR/0413/66/000/021/0112/0112

INVENTOR: Belousov, N. N.; Dodonov, A. A.; Ivankin, A. A.; Yegorova, V. A.

ORG: none

TITLE: Cast aluminum-base alloy. Class 40, No. 188012

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 112

TOPIC TAGS: aluminum, magnesium, beryllium alloy, titanium containing alloy, zirconium containing alloy, cast aluminum alloy

ABSTRACT: This Author Certificate introduces a cast aluminum-base alloy containing magnesium, beryllium, titanium, and zirconium. To improve its mechanical properties and ensure satisfactory corrosion resistance and formability, the alloy composition is set as follows: 10—11.5% magnesium, 0.05—0.12% beryllium, 0.03—0.1% titanium, 0.03—0.1% zirconium, 0.01—0.15% boron and 0.07—0.2% manganese, with impurities such as iron, silicon, copper and zinc, each not exceeding 0.05%. [ND]

SUB CODE: 11/ SUBM DATE: 04Dec65/ ATD PRESS: 5110

Card 1/1

UDC: 669.71.5'721' '725'295'296'74'781

YEGOROVA, V.D.

"Study of the Epizootological Factors During Infectious Enterotoxemia
(Disease Similar to Bradsot (Anthrax) of Sheep." Cand Vet Sci, All-Union
Inst Experimental Veterinary Sci, Min Agriculture USSR, Moscow, 1955. (SL,
No 14, Apr 55)

SO: Sum.No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations
Defended at USSR Higher Educational Institutions (16).

DOMARADSKIY, I.V.; YEGOROVA, V.D.

Cysteine metabolism in plague microbe cultures. Izv.Irk.gos.
nauch.-issl.protiwochum.inst. 18:103-110 '58. (MIRA 13:7)
(CYSTEINE) (PASTEURILLA PESTIS)

TEGOROVA, V.D.; DOMARADSKIY, I.V.

Dissimilation of some amino acids under the influence of plague
and pseudotuberculosis microbes. Izv. Irk. gos. nauch.-issl. proti-
vochum. inst. 18:81-82 '58. (MIRA 13:7)
(AMINO ACID) (PASTEURILLA PESTIS)
(PASTEURILLA PSEUDOTUBERCULOSIS)

DOMARADSKIY, I.V.; YEGOROVA, V.D.

Cysteine metabolism in *Bacillus pestis* cultures. *Vop. med. khim.*
5 no.1:60-66 Ja-F '59. (MIRA 12:3)

1. The State Anti-Plague Research Institute of Siberia and the Far
East, Irkutsk, and the "Microbe" Institute, Saratov.

(*PASTEURURELIA PESTIS*, metab.

cystoine (Rus))

(*CYSTEINE*, metab.

Pasteurella pestis cultures (Rus))

YEGOROVA, V.D.; DOMARADSKIY, I.V.

Saccharide composition of the polysaccharide-containing fraction
of the plague microbe. Izv.Irk.gos.nauch.-issl.protivochum.inst.
20:343-345 '59. (MIRA 13:7)

(SACCHARIDES)

(PASTEURELLA PESTIS)

YEGOROVA, V. D. and RAZUMOVSKIY, P. N. (Candidates of Veterinary Sciences,
Smolensk NIVS)

"The testing of polymyxin in gastro-intestinal diseases of young
pigs"

Veterinariya, Vol. 38, no. 10, October 1961, pp. 81-89

YEGOROVA, V.D., kand.veterinarnykh nauk; ZUBCHENKOV, V.I., kni.veterinarnykh nauk

Treatment and prevention of infectious atrophic rhinitis.
Veterinariia 39 no.1:41-42 Ja '62. (MIRA 15:2)

1. Smolenskaya nauchno-issledovatel'skaya veterinarnaya
stantsiya.

(Swine--Diseases and pests)

MALININA, Z.Ye.; YEGOROVA, V.D.

Study of the virulence of the plague microbe and production of live plague vaccines. Report No. 3: Chemical composition of plague microbes of various virulence. Zhur. mikrobiol., epid. i immun. 41 no.10:98-102 '64. (MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy protivochumnyy institut "Mikrob".

BAKHRAKH, Ye.E.; YEGOROVA, V.D.; DENISOVA, Ye.P.

Distribution of protein and polysaccharide in the cells of
the plague microbe grown at 28 - 37°. Zhur. mikrobiol., epid.
i immun. 41 no.10:135-139 '64. (MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut "Mikrob".

BAKHRAKH, Ye.E.; YEGOROVA, V.D.; FILIPPOV, A.F.

Effect of the temperature regimen on the chemical composition of the plague microbe. Zhur. mikrobiol., epid. i immun. 40 no.11:22-32 N 196.
(MIRA 17:12)

1. Iz Vsesoyuznogo nauchno-issledovatel'skogo instituta "Mikrob".

35364

3/057/62/032/003/011/019
3111/3102

26.7311

AUTHORS: Yegorova, V. F., Isayenko, V. I., Mak, A. A., and Sadykova, A. I.

TITLE: Distribution of temperature and electron concentration in the channel of a spark discharge

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 3, 1962, 338 - 345

TEXT: Temperature distribution, plasma density, and widening rate of a spark channel were determined by measuring the intensity of its line spectrum (error 50%). With known temperature and intensity distribution of the radiation the electron concentration can be accurately determined by the given method. The measuring arrangement consisted of a monochromator, photomultiplier, and amplifier plus oscilloscope and of an electron-optical apparatus connected synchronously. The temperature in the spark channel was determined in He, air, and N₂ by three different methods: a) by meas-

uring the absolute intensity of a spectral line, b) by measuring the intensity ratio of two spectral lines, c) by comparing the radial intensity dis-

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X

Distribution of temperature ...

S/057/62/032/003/011/019
B111/B102

tribution $I(r)$ in the channel and the temperature dependence $I(T)$. If the ionization equilibrium in the plasma is known, the temperature can be calculated by successive approximation (maximum error of the three methods $\pm 10 - \pm 15\%$). The electron concentration was calculated by the Kramers-Unsöld formula (Ref. 6: H. Moecker, T. Peters, Zs. Phys., 139, 440, 1954; F. Finkelburg, T. Peters, Hand. d. Phys., 28, Berlin, 1957) (measurement error $\pm 10\%$). Results: 1) The distribution of temperature and electron concentration in the spark channel is uniform. 2) The temperatures determined by the three methods agree well. Differences are below measurement accuracy. This justifies assuming a Boltzmann distribution of the excited atoms and using the Saha formula for ionization. 3) The mean temperature in the channel agrees well with the value on its axis. 4) The difference in the values of electron concentration obtained by measuring the background on the one hand and the shift of the spectral lines on the other is not due to inhomogeneities but to shortcomings in the plasma radiation theory. The authors thank E. P. Vanyukov for discussing the results. There are 6 figures, 1 table, and 11 references: 7 Soviet and 4 non-Soviet.

SUBMITTED: April 5, 1961 (initially) May 25, 1961 (after revision)
Card 2/2

X

L 10728-63

ESD-3/RADC/APGC/AFWL EWA(k)/ENT(1)/FRD/T-2/3W2/EEC(b)-2/ES(t)-2/BDS AFFTC/ASD/
P1-4/Pc-4 JHB/WG/IJP(C)/K/EH

ACCESSION NR: AP3003116

S/0056/63/044/006/1884/1888 ⁸²
₈₁

AUTHOR: Anan'yev, Yu. A.; Yegorova, V. F.; Mak, A. A.; Prilezhayev, D. S.;
Sedov, B. M.

TITLE: On the operation of a four-level laser ²⁵

SOURCE: Zhurnal eksper. i teor. fiziki, v. 44, no. 6, 1963, 1884-1888

TOPIC TAGS: four-level laser, trivalent uranium laser, divalent samarium
laser, calcium fluoride laser

ABSTRACT: A theoretical and experimental study of the operation of a four-level
laser has been conducted. Equations were derived for steady-state operation,
cavity parameters, properties of working substances and host substances,
pumping power, threshold, energy-level populations, various transition proba-
bilities, and output power. To verify the theoretical calculations, experiments
were conducted to determine the dependence of pumping power and output power

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ACCESSION NR: AP3003116

of samarium-doped and uranium-doped calcium fluoride lasers on crystal temperature and reflection factor of the mirrors and to determine the relationship between pumping power and output power. Cylindrical crystals with dielectric-coated end faces were used with temperatures ranging from 8 to 300K. Experimental results were in good agreement with the theoretical. Conditions for the transition from four-level to three-level operation were found for the uranium-doped calcium fluoride laser. Orig. art. has: 10 formulas and 4 figures.

ASSOCIATION: Gosudarstvennyy optichesky institut im. S. I. Vavilova
(State Institute of Optics)

SUBMITTED: 21Feb63

DATE ACQ: 23Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 001

OTHER: 002

YH/2
Card 2/2

L 15279-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(h) IJP(c) JD

ACC NR: AT6001399

SOURCE CODE: UR/3180/64/009/000/0151/0152

AUTHOR: Vanyukov, M. P. (Candidate of physico-mathematical sciences); Galaktionova, N. A.; Yegorova, V. F.; Mak, A. A.

ORG: none

TITLE: Radiation from spark discharges in gas mixtures

SOURCE: AN SSSR. Komissiya po nauchnoy fotografii i kinematografii. Uspekhi nauchnoy fotografii, v. 9, 1964. Vysokoskorostnaya fotografiya i kinematografiya (High-speed photography and cinematography), 151-152

TOPIC TAGS: gas discharge plasma, gas discharge, xenon, helium

21, 44, 55

ABSTRACT: Earlier studies of the brightness of spark discharges showed that while in the case of light gases such discharges produce high temperature channels but achieve the limiting brightness only with strong discharges and at high pressures, heavy inert gases exhibit low limiting brightness, but this limit can be reached under soft discharge conditions and at low pressures. In the present note the authors investigate experimentally and theoretically a mixture of a light (basic) and heavy (admixture) gas which would allow the formation of very bright channels under soft discharge conditions and low pressures. Calculations of the ratio of energy losses due to the admixture to those of the basic gas and of the ratio of the respective coefficients of absorption showed that the most promising seem to be mixtures of gases of very different atomic weights (e.g., He + Xe). Experimental results are summarized in Fig. 1.

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L 15279-66
ACC NR: AT6001399

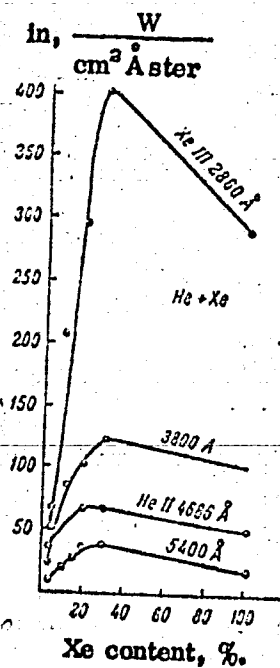


Fig. 1. Spectral brightness density as a function of Xe admixture in helium base gas

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ACC NR: AT6001399

The brightness increase found in He + Xe mixtures did not materialize in tests using He + Ar mixtures. Orig. art. has: 2 figures.

SUB CODE: 20 / SUBM DATE: none / ORIG REF: 003

Card 3/3

L 2082-66 EWA(k)/EPD/ENT(1)/EEC(k)-2/T/EWP(k)/EMA(m)-2/EWA(h) SCTB/IJP(c) WG
 ACC NR: AP5026595 SOURCE CODE: UR/0056/65/049/004/1068/1071

AUTHOR: Galaktionova, N. M.⁴⁴; Yegorova, V. P.⁴⁴; Mak, A. A.⁴⁴

ORG: State Optical Institute (Gosudarstvennyy opticheskiy institut)

TITLE: The effect of anomalous dispersion on the stimulated emission spectrum of crystals

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 4, 1965, 1068-1071

TOPIC TAGS: solid state laser²⁵¹⁴⁴, stimulated emission, dispersion, anomalous dispersion, spectroscopy, dysprosium ion, uranium ion

ABSTRACT: A study was made of the stimulated emission spectra of $\text{CaF}_2:\text{Dy}^{2+}$ crystals at $\lambda = 2.36 \mu$, and $\text{CaF}_2:\text{U}^{3+}$ crystals at $\lambda = 2.22 \mu$ (see Fig. 1). The crystal temperature was varied in the 30—100K range. The dependence of the luminescence line-width on temperature was established for both crystals. Spectroscopic investigations carried out by means of photoelectric equipment with a Fabry-Perot etalon (base $L = 10\text{--}30 \text{ mm}$) showed that in the above temperature range the $\text{CaF}_2:\text{U}^{3+}$ crystals exhibited a Lorentz line shape, and the $\text{CaF}_2:\text{Dy}^{2+}$ a Gaussian shape, which is indicative of a nonuniform line broadening in the $\text{CaF}_2:\text{Dy}^{2+}$ crystals. Multilayer dielectric mirrors with a 98% reflection coefficient (at $\lambda = 2.36 \mu$) were used. Spectrum scanning was carried out with the etalon inside a variable-pressure baric chamber. The displacement of modes (up to 0.1 \AA) due to temperature instability was considerable.

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ACC NR: AP5026595

The number of displacements for $\text{CaF}_2:\text{Dy}^{2+}$ was from 1 to 3, depending on the crystal temperature, excess threshold energy, and mirror transmissivity. The decrease in

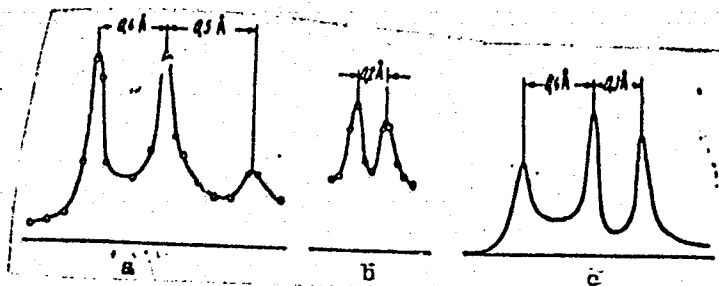


Fig. 1. Stimulated emission spectra

a - Pulsed mode, $L = 40.5$ mm, $T = 97\text{K}$; b - pulsed mode, confocal resonator, $L = 36.5$ mm, $T = 94\text{K}$; c - continuous mode, $L = 40.5$ mm, $T = 80\text{K}$.

temperature and the corresponding narrowing of the luminescence line caused a decrease in $\Delta\lambda$ (difference in wavelength of two adjacent axial modes) and, in the case of $\text{CaF}_2:\text{Dy}^{2+}$, disturbed the mode equidistance. The averaged experimental data are presented in Table 1. The data indicate that the effect of anomalous dispersion of

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1. 2082-66

ACC NR: AP5026595

Table 1. Averaged experimental data

Crystal	L, mm	Mirror transmissivity, %	Operation	T, °K	No. of modes	$\Delta\lambda, \text{\AA}$	Mode intensity ratio	$\Delta\lambda/\Delta\lambda_p$
$\text{CaF}_2:\text{Dy}^{2+}$	29	20	Continuous, threshold	~80	1			
$\text{CaF}_2:\text{Dy}^{2+}$	40.5	20	Continuous, super-threshold-3	~80	2	0.47	1:0.07	0.7
			Continuous, threshold	~80	2	0.46	0.65:1	0.95
			Continuous, super-threshold-3 Pulsed	~80 98	3 3	0.4; 0.3 0.43; 0.46	0.5:0.5:1 1:0.9:0.5	0.83; 0.62 0.89; 1.0
$\text{CaF}_2:\text{Dy}^{2+}$	40.5	2	Pulsed	~72 74 86 100	1 2 2 2	0.4 0.45 0.48		0.83 0.93 1.0
$\text{CaF}_2:\text{Dy}^{2+}$	36.5 Con-focal resonator	5	Pulsed	94	2	0.2	0.7:1	0.74
$\text{CaF}_2:\text{U}^{3+}$	23	53	Pulsed	28 46 68 86	1 2 3 4	0.3 0.54 equidist modes 0.76 equidist modes	1:0.7	0.39 0.71

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L 2082-66

ACC NR: AP5026595

the stimulated emission spectrum of crystals, which leads to mode tightening, can be considerable. When no thermal effects are assumed, mode tightening is independent of pumping. A fully quantitative interpretation of the data would require consideration of effects associated with the field distribution in a resonator and other effects (H. Haken, H. Sauermann, Zs. Phys., 173, 261, 1963; 176, 47, 1963). [YK]

Orig. art. has: 1 table and 3 figures.

SUB CODE: SS, OP/ SUBM DATE: 21May65/ ORIG REF: 006/ OTH REF: 003/ ATT PRESS: 4122

Card 4/4

L 29216-66

SOURCE CODE: UR/0051/66/020/005/0890/0897

ACC NR: AP6015433

AUTHOR: Yegorova, V. F.; Zubkova, V. S.; Mak, A. A.; Prilezhayev, D. S.

ORG: none

TITLE: Luminescence and stimulated emission spectrum of $\text{CaF}_2\text{-U}^{3+}$ crystals

SOURCE: Optika i spektroskopiya, v. 20, no. 5, 1966, 890-897

TOPIC TAGS: absorption spectrum, excitation spectrum, luminescence spectrum, crystal phosphor, fluorite, color center, uranium

ABSTRACT: Data are given from a detailed analysis of the absorption, luminescence, and stimulated emission spectra of fluorite crystals activated by trivalent uranium ions at 4.2-300°K. A vacuum monochromator with a resolution of 1.5-3 Å at $\lambda=2.5 \mu$ was used for taking the absorption and luminescence spectra. An incandescent lamp with a tungsten filament was used for exciting luminescence in the crystal. An FEU-22 photomultiplier and a cooled lead sulfide resistor were used as detectors. The recording system was made up of an amplifier, asynchronous detector, and a PS1-02 electronic potentiometer. It was found that the absorption spectra of these crystals is due to at least four types of color centers. The specimens were divided into two classes, the first being lilac in color and the second—red. Each type has its distinct characteristics in absorption, luminescence, and excitation spectra. Crystals containing both

UDC: 621.375.9 : 535

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L 29216-66

ACC NR: AP6015433

types of centers (mixed type) show more complex spectra. The difference between crystals of the first and second type is most pronounced in the absorption and luminescence spectra in the near infrared region. The spectrum for crystals of the first type is rather simple in the 2.1-2.6 μ region. Absorption resonance lines are observed at 2.15 and 2.223 μ and an additional line is observed in the luminescence spectrum at 2.43 μ which disappears at helium temperatures as well as a line at 2.512 μ which is observed at low temperatures. Luminescence excitation in crystals of the first type is due chiefly to absorption in the 0.4-0.6 μ region of the spectrum. The spectrum for crystals of the second type is more complex with six resonance lines at 2.15, 2.252, 2.246, 2.237, 2.228, and 2.221 μ which may be due to transitions between the ground level and splitting components of the $^4I_{11/2}$ state. Luminescence excitation for crystals of the second type takes place chiefly in the 0.7-1.2 μ spectral region due to wide absorption bands. Experimental data were used for constructing the diagrams of lower levels for crystals of both types. Considerable interaction is observed between centers of the first and second type in mixed crystals. Crystals of the first type show stimulated emission in three spectral bands: 2.512 μ , 2.435 μ , and 2.223 μ . The positions of the emission peak with respect to time for the 2.512 and 2.223 μ bands show a considerable degree of correlation: the emission maximum in one band corresponds to the minimum in the other. This indicates that these bands have a common initial upper level. Stimulated emission is observed in crystals of the second type in the 2.518 and 2.61 μ bands. Stimulated emission in crystals of this type is due basically to absorption bands at 0.8 and 0.9 μ . Mixed crystals show simul-

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L 29216-66

ACC NR: AP6015433

taneous emission in the 2.512, 2.518 and 2.518 μ bands. The interaction between centers of the first and second type in these crystals is discussed. Orig. art. has: 7 figures. [14]

SUB CODE: 20/

SUBM DATE: 22Jun64/

ORIG REF: 005/

OTH REF: 003/

ATD PRESS: 5004

Card 3/3 CC

ACC NR: AF7004139

SOURCE CODE: UR/0051/67/022/001/0068/0073

AUTHOR: Galaktionova, N. M.; Yegorova, V. P.; Zubkova, V. S.; Mak, A. A.

ORG: none

TITLE: Spectroscopic investigation of $\text{CaF}_2:\text{Dy}^{++}$ crystals

SOURCE: Optika i spektroskopiya, v. 22, no. 1, 1967, 68-73

TOPIC TAGS: calcium fluoride, activated crystal, luminescence spectrum, absorption spectrum, line width, line broadening, chemical reduction, *DYSPROSIUM, IONIC CRYSTAL*

ABSTRACT: The authors used high-resolution apparatus, consisting of a diffraction-grating monochromator and of a Fabry-Perot interferometer combined with a monochromator, to investigate the luminescence and absorption spectra of $\text{CaF}_2:\text{Dy}^{++}$ crystals. Two types of crystals were tested, reduced by exposure to gamma rays and by treatment with calcium vapor. The former showed much higher absorption at 300-400 nm wavelength than the latter, which is attributed not to the formation of Dy^{++} , but to the production of other centers in the crystal. The latter showed more absorption near 700 nm. The two types of crystals differed also in their thermal and radiation stability and in their degree of discoloring. The luminescence spectra consisted of two line groups near 2.3 and 2.6 μ . Lowering the temperature decreased the number of lines in the groups. The line contours were also temperature dependent, changing from Maxwellian to Lorentzian with rising temperature. The luminescence line widths were found to be quite small, reaching 0.04-0.08 cm^{-1} at 4.2K, with

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UDC: 535.372+535.34:548.0

ACC NR: AF7004139

weak temperature dependence. The broadening is assumed to be inhomogeneous. Radiochemical reduction results in a lower Dy^{++} ion concentration (up to 5% of the total Dy in the crystal) than reduction in calcium vapor (up to 15%). The concentration quenching of the luminescence is negligible. An empirical scheme is presented for the lower levels of Dy^{++} in the CaF_2 . Orig. art. has: 8 figures. [02]

SUB CODE: 20/ SUBM DATE: 29May65/ ORIG REF: 002/ OTH REF: 003
ATD PRESS: 5115

Card 2/2

YEGOROVA V.I.

PROCESSES AND PROPERTIES

Catalytic hydrogenation of allylic hydrazines. I. Hydrogenation of ketazines of cyclohexanone and its methyl derivatives. V.I. Yegorova. *J. Gen. Chem.* (U.S.S.R.), 8, 1404-17 (1930).-- The influence of the introduction and the position of substituents in the ring on the rate of catalytic hydrogenation of ketazines was studied by hydrogenating ketazines of cyclohexanone (I), 1,2- (II), 1,3- (III) and 1,4-methylcyclohexanone (IV) in 100% AcOH and abs. alc. in the presence of Pt black by the method of Tulpale and Usachev (*C. A.* 25, 2415). The results show that the introduction of a substituent into the I ring retards the addn. of H_2 to the azimethylene group ($>C=N-N-C<$), and that the rate of hydrogenation varies with the relative position of the radical to the azimethylene group. The retardation is greatest for the α - and smallest for the β -substituted compds., m -derivs. occupying the intermediate position. The chief products of reaction are hydrazo compds. (V). Free V were isolated by satg. the reaction mixts. with dry HCl at 0° . The pptd. $V \cdot 2HCl \cdot H_2O$ were decompd. by gentle heating in a vacuum desiccator, forming $V \cdot HCl$. These were freed from the AcOH by vacuum distn. and then decompd. with concd. KOH under H_2O . The H_2O was dried with H_2O and distd. off. All these operations were performed in 11 atm. The consts. for V and their derivs., prepd. for the 1st time, were detd. Ketazines were obtained by interaction of the ketones with 80% $(NH_4)_2H_2O$ soln. or $(NH_4)_2H_2SO_4$ in alk. soln. All the ketones used were optically inactive.

I ketazine, m. $33-4.6^\circ$. II ketazine, bp 102° , bp $108-70^\circ$, d_4^{20} 0.978, d_4^{20} 0.983, para- (observed) 561.2 (P_{calc} 560.4), mol. wt. 203.4 (calcd. 220). III ketazine, bp 167° , bp $178-9^\circ$, d_4^{20} 0.908, d_4^{20} 0.9436, M. R. 69.03 (calcd. 68.65), P_{calc} 561.8 (P_{obs} 561.2). IV ketazine, bp $175-7^\circ$, bp 189° , d_4^{20} 0.9676, d_4^{20} 0.9466, P_{calc} 557.6 (P_{obs} 561.2), mol. wt. 203 (calcd. 220). Hydrazocyclohexane, bp $200-70^\circ$ (in 11 atm.); the azo deriv., m. 33° , resulted by oxidation with H_2O_2 . 1,2-Hydrazomethylcyclohexane, bp $145-53^\circ$, bp 176° , d_4^{20} 0.8606, d_4^{20} 0.8576, mol. wt. 222.8 (calcd. 224), P_{calc} 570.1 (P_{obs} 571.0). 1,3- and 1,4-Hydrazomethylcyclohexane were not isolated from the HCl salts. Twenty references.

Chas. Hlane

COMMON ELEMENTS		1ST AND 2ND ORDER		3RD AND 4TH ORDER	
<p>CA V. YEGOROVA, B.I.</p>		<p>PROCESSES AND PROPERTIES INDEX</p>		<p>12</p>	
<p>Catalytic hydrogenation of alicyclic ketazines. II. Influence of cyclization on the rate of hydrogenation of ketazines. V. I. Yegorova. <i>J. Gen. Chem.</i> (U. S. S. R.) 9, 1047-51 (1939); cf. <i>C. A.</i> 31, 2174. — R.'s work on the effect of substituents and their positions on the rate of hydrogenation of alicyclic ketazines showed that substitution lowered the rates of hydrogenation. The influence of cyclization on the rate of hydrogenation of ketazines was found to be markedly favorable. The products of hydrogenation were isolated as the hydrazine-HCl salts. A 73% yield of Me cyclohexyl ketazine, (Me(C₆H₁₁C=N)₂ (I) was obtained by refluxing 25.2 g. of the ketone with 5 g. NaH, H₂O for 20 hrs. The product, washed with cold alc., was recrystd. from hot ether, colorless crystals, m. 55-56°. Me hexyl ketazine (II), similarly prepd., b.p. 280-91°. Hydrogenation took place in alc. with 0.1 cc. glacial AcOH, using Pt black (Wallerstein). The relation of the hydrogenation rates for I and II was 1.5:1. The hydrogenation product from I b.p. 223°, that from II b.p. 168°.</p>					
<p>ASB-55A METALLURGICAL LITERATURE CLASSIFICATION</p>					
<p>STONY DIVISION</p>		<p>STONY DIVISION</p>		<p>STONY DIVISION</p>	
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YEGOROVA, V. I.

^A
✓ Diacetylene compounds. V. I. Egorova and O. M. Kuznetsova. U.S.S.R. 105,425, May 25, 1957. The compds. are obtained by oxidation of monoacetylene compds. The oxidation is carried out in the presence of CuSO_4 , NH_4Cl , and NaOH .
M. Hesch.

2
1-4E3u
1-4E4i
1-4E2c (7)
2-MAY

72

YEGOROVA, V.I.

Selecting nozzles for automatic bottle-washing machines. Trudy
Len. khim.: -farm. inst. no. 4:69-74 '58. (MIRA 12:12)
(Bottle washing)

YEGOROVA, V.I.; SLAVYANOV, Yu.N.

Effect of pressure and pressing time on the impact strength and
disruptiveness of tablets. Trudy Len. khim.- farm. inst. no.4:99-104
'58. (MIRA 12:12)

(Tablets (Medicine)--Testing))

YEGOROVA, V.I.; RABOTNOV, N.K.; SLAVYANOV, Yu.N.; FILIPIN, N.A.

Testing tablets for hardness. Med.prom. 13 no.12:26-29 D '59.

(MIRA 13:4)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(TABLETS (MEDICINE))

YEGOROVA, V.I.; SLAVYANOV, Yu.N.; BARTASHEVICH, O.A.

Evaluation of the quality of tablets by their tendency to pulverization. Med.prom. 15 no.1: JA '61. (MIRA 14:1)

1. Leningradskiy khimiko-farmatsvticheskiy institut.
(TABLETS (MEDICINE))

YEGOROVA, V.I.; VIKUL'YEVA, E.I.

Effect of granule humidity and compression force on the quality of tablets. Med. prom. 15 no.9:37-40 S '61. (MIRA 14:9)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(TABLETS (MEDICINE))

YEGOROVA, V.I.; SLAVYANOV, Yu.N.

Unity of the indices for mechanical tablet stability. Med. proc. 16
no.3:20-24 Mr '62. (MIRA 15:5)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(TABLETS (MEDICINE))

YEGOROVA, V.I.; SLAVYANOV, Yu.N.

Effect of fillers on the properties of pyramidon tablets.
Trudy Len. khim.-farm. inst. no.14:99-103 '62 (MIRA 17:2)

YEGOROVA, V.I.

36-65-6/10

AUTHOR: Yegorova, V.I.

TITLE: Determination of the Boundaries and Characteristics of Regular Synoptic Seasons (Opyt ustanovleniya granits i kharakteristik yestestvennykh sinopticheskikh sezonov)

PERIODICAL: Trudy Glavnoy geofizicheskoy observatorii, 1956, Nr 65(127), pp. 41-69 (USSR)

ABSTRACT: The author tries to establish the main principle on which the division of time into seasons is based. As commonly understood, a season corresponds to long periods of relatively uniform atmospheric circulation caused by some circulatory mechanism, radiative processes, and solar action. Notwithstanding the complex character of seasonal changes in circulation, the types of seasons and the dates of the beginning and end of each are established. Mul'tanovskiy, B.P. is mentioned. There are 11 figures, 4 tables, and 14 references, all USSR.

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YEGOROVA, V.I.

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PHASE I BOOK EXPLOITATION

SOV/2270

Glavnaya geofizicheskaya observatoriya

Voprosy sinopticheskoy klimatologii (Problems in Synoptic Climatology) Leningrad, Gidrometeoizdat, 1959. 105 p. (Series: Itogi nauki, v. 87) 1,100 copies printed.

Sponsoring Agency: Glavnoye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR.

Ed. (title page): T.V. Pokrovskaya. Candidate of Geographical Sciences; Ed. (inside book): T.V. Ushakova; Tech. Ed.: A. N. Sergeyev.

PURPOSE: This issue of the Observatory's Transactions is intended for meteorologists and climatologists.

COVERAGE: The authors are primarily concerned with the possibility of using various monthly characteristics of atmospheric circulation in forecasting monthly air temperature anomalies.

One of the articles discusses the inertia of the temperature and its utilization in forecasting. Other articles are concerned with the effects of solar activity on atmospheric circulation. The last article is devoted to the probability of cyclical regional distribution of mean negative diurnal temperatures, offering also a synoptic and climatological analysis of the results obtained. References accompany each article.

TABLE OF CONTENTS:

Tokouskaya, T.V. Application of the Multiple Correlation Method to the Qualitative Rules of Long Range Weather Forecasting	3
Yorob'yeva, Ye.V. Forecasting the Sign [Negative or Positive] of Mean Monthly Air Temperature Anomalies in the Southeastern Part of European USSR	10
Spurina, L.P. Possibility of Forecasting the Inertial Monthly Air Temperature Anomalies	32
Bakipova, L.R. Effect of Solar Activity on the General Atmospheric Circulation	40
Spitsyna, M.L. One Concrete Example of the Effect of Recurrent Sunspots on Atmospheric Circulation	46
Vitel's, L.A. Solar Activity, Transformations in Atmospheric Circulation, and the Monthly Temperature Fluctuations	56
Yegorova, V.I. The Problem of the Periodicity of the Basic Forms of Atmospheric Circulation	66
Yezay, E.A., and V.B. Afanas'yeva. Probability of Negative Mean Diurnal Temperature in European USSR and Western Siberia in Transition Seasons	86

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Card 3/3

MM/66
9-21-55

YEGOROVA, Valentina Ivanovna; USHAKOVA, T.V., red.; SERDYUK, V.N.,
stv.red.; BRAYNINA, M.I., tekhn.red.; VLADIMIROV, O.G.,
tekhn.red.

[Method for the preparation of ten-day weather forecasts]
Metod kompleksnogo prognoza pogody na 10-dnevnye periody.
Leningrad, Gidrometeor.izd-vo, 1960. 78 p.

(MIRA 14:2)

(Russia, Northern--Meteorology, Maritime)

PHASE I BOOK EXPLOITATION

SOV/5149

Yegorova, Valentina Ivanovna

Metod kompleksnogo prognoza pogody na 10-dnevnyye periody (Method of Complex Weather Forecasting for 10-Day Periods) Leningrad, Gidrometeoizdat, 1960. 78 p. Errata slip inserted. 900 copies printed.

Sponsoring Agency: Glavnoye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR, and Glavnaya geofizicheskaya observatoriya imeni A.I. Voyeykova.

Resp. Ed.: V.N. Serdyuk; Eds.: T.V. Ushakova; Tech. Ed.: M.I. Braynina and O.G. Vladimirov.

PURPOSE: This booklet is intended for hydrometeorologists.

COVERAGE: This booklet presents material based on data obtained in the Kara and Laptev Seas regions for the study of the pressure fields of elementary synoptic processes. Analyses of the systematic development of these synoptic processes within basic types of atmospheric circulation (W,E,C) systems make it possible

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Method of Complex Weather Forecasting (Cont.)

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to forecast the development of such processes and the weather for 8 - 10 day periods in the Northern Hemisphere with a considerable degree of accuracy. The investigations of G.Y. Vangengeym are mentioned in the Introduction. There are 57 references: 50 Soviet, 4 German, and 3 English.

TABLE OF CONTENTS:

Introduction	3
Ch. I. Synoptic-Climatological Characteristics of the Kara Sea	6
Effect of topography on climate	6
Characteristics of air pressure and wind regime	7
Thermal characteristics	11
Ch. II. Forecasting Synoptic Processes and Weather for 10-Day Periods	12
General considerations	12
Defining the problem	15

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S/169/61/000/007/072/104
A006/A101

3,5000

AUTHOR: Yegorova, V.I.

TITLE: A method of complex weather forecasting for 10-day periods

PERIODICAL: Referativnyy zhurnal. Geofizika, no. 7, 1961, 68-69; abstract 7B429
(Leningrad, Gidrometeoizdat, 1960, 79,p., 111. 2 rubles 80 kop.)

TEXT: An analysis has been made of the consecutive development of elementary synoptic processes (ESP) inside the basic forms of Wengenheim atmospheric circulations. On the basis of this analysis indications were obtained allowing the forecasting of synoptic processes and weather for 8 - 10 days in August-September over the northern hemisphere space. The suggested forecasting method was practically applied in 1948 - 1949 and yielded promising results. Chapter one contains synoptic and climatic characteristics of the Karskoye Sea. The most characteristic feature of the Karskoye Sea climate is the low variability of the summer air temperature. July and August are the warmest months. Over the ice the temperature rises rarely over 0°C and only for a short time. The least number of days with a mean air temperature over zero is 50 in the northern part of the Sea; the greatest number of such days (120) was observed in the south-west.

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A method of complex weather forecasting ...

term part. The duration of a frostless period in the southern part of the Sea is 1 - 2 months, and only in particular cases the frostless period may last up to 3 months. In August and September north-east winds are most stable (6 - 7 days). During the winter the winds are very stable. Thus, winds of the southern quarter can be sometimes observed for 30 and even 50 days running, with 1 - 2 day interruptions. The average wind speed fluctuates from 6 to 9 m/sec. Maximum speed exceeds 40 m/sec and attains sometimes 60 m/sec. During the summer the underlying surface promotes the development of meridional and eastern circulation. Chapter two describes methods for the analysis and forecasting of synoptic processes and weather for 10 days. The analysis of the processes was conducted by ESP, i.e. by spells during which the geographical distribution of baric field signs is preserved, as well as the orientation of the basic transport of warm and cold air masses. The mean duration of ESP is 3.3 days. Criteria predetermining the development of processes and weather were developed on the basis of an analysis of ground and upper-air charts for August-September 1939 - 1947. Analogous ESP are combined into 13 types and 13 sub-types of basic weather forecasting processes. A successiveness was revealed between the initial type and the following weather, wind direction and air temperature. The interchange of circulation types is staggered and manifested in the fact that in the last ESP,

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advective and dynamical factors in individual regions reverse their sign and a process of another form begins to increase. The author discusses the dynamical peculiarities of western, meridional and transitional types of circulation forms; the latter form was introduced by the author. Modifications of each form of circulation are represented in separate charts whose characteristics are briefly described. Analyses of ESP and of accessory materials on upper-air frontal zones and isallohypse charts are used for a series of prognostic indications for 8 - 10 days. The prognosticator who undertakes the compiling of the weather forecast should proceed as follows: 1) Analyze the processes near the earth and in the mid-troposphere, and on the basis of this analysis determine the ESP limits and the circulation form (W, C and E), 2) Calculate the mean value of the isohypses of the preceding ESP. 3) Plot an average AT-500 chart of initial ESP. 4) Plot an AT -500 isallohypse chart (The difference of AT-500 of the current and previous ESP). 5) Superpose the isallohypse and the isohypse charts of the current ESP. 6) Determine the future evolution of upper-air dynamic centers. If the isallobaric seats are distributed according to the signs of an upper-air baric field, this indicates the stability of the baric field and consequently that of ground-near synoptic processes. 7) If the isallohypse seats are in the upper-air frontal zone, the further advection of air masses and the evolution

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and displacement of baric centers over the ground should be determined. 8) Build-up a scheme of the synoptic process to be expected, using the suggested methods. 9) Select a process analogous to the last ESP or an analogue. The weather forecast is issued on the basis of the mean characteristics for each type. There are 57 references.

N. Zverev

[Abstracter's note: Complete translation]

Card 4/4

YEGOROVA, V.I.

Water-vapor distribution in the troposphere and lower
stratosphere. Meteor. issl. no.9:72-93 '65.

(MIRA 19:1)

CA YEGOROVA, V.K.

Microbiology 11-c

Some physiological characteristics of *Clostridium pasteurianum*. I. L. Rabotnova, V. K. Egorova, G. K. Ozolina, and I. K. Kletskii (State Univ., Moscow). *Microbiology* 21, 437-37(1952).—Under lab. conditions cultures of *Cl. pasteurianum* in symbiosis with *B. clausuroides* have both spore-forming and N-fixing powers of *Cl. pasteurianum*. But fresh symbiotic cultures fix N independently of the combined N content in the medium. In presence of yeast autolyzate, N fixation reached 406 mg./l. Loss of N-fixing power is retarded by Mo salts (e.g., $(NH_4)_2MoO_4$ or Na_2MoO_4); the optimum concn. is 10 mg./l. I. P. S.

YEGOROVA, V.K. (Moskva)

Effect of hypothermia on manifestations of serum anaphylaxis. Pat.
fiziol. i eksp.terap. 3 no.5:76-77 S-O '59. (MIRA 13:3)

1. Iz otdela patofiziologii (zaveduyushchiy - kand.med.nauk G.M.
Segalovich) Nauchno-issledovatel'skogo instituta ukha, foral i nosa
(direktor - zasluzhennyy deyatel' nauk prof. V.K. Trutnev) Ministerstva
zdravookhraneniya RSFSR.
(HYPOTHERMIA) (ANAPHYLAXIS)

YEGOROVA, V.K. (Moskva)

Ménière's disease. Med. sestra, 21, no.2:18-22 F '62. (MIRA 15:3)
(MENIERE'S DISEASE)

YEGOROVA, V.M.

Treatment of Meniere's disease. Zhur.ush., nos.1 gorl.bol. 22
no.4876-77 Fl-Ag '62. (MIRA 16:2)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo instituta
ukha, gorla i nosa Ministerstva zdravookhraneniya RSFSR 9dir. -
prof. N.A. Bobrovskiy).

(MENIERE'S DISEASE)

YEGOROVA, V. M.

STARTSEV, V.T.; RAZMAKHANIN, S.L.; YEGOROVA, V.M.; PASHANOVA, L.D.; YEVSEYEV,
V.R.; BASTIN, K.F.; BELOBORODOV, P.P.; DEDOV, N.D., red.

[Economy of Amur Province; a statistical manual] Narodnoe khoziaistvo
Amurskoi oblasti; statisticheskii sbornik. Blagoveshchensk, Amurskoe
knizhnoe izd-vo 1957. 111 p. (MIRA 11:6)

1. Amur (Province). Oblastnoye statisticheskoye upravleniye. 2.
Statisticheskoye upravleniye Amurskoy oblasti (for all except
Beloborodov, Dedov). 3. Nachal'nik Statisticheskogo upravleniya
Amurskoy oblasti (for Beloborodov)
(Amur Province--Statistics)